

CLAIMS

1. A method of buffering a video signal, comprising the steps of:

(A) storing a plurality of pictures decoded from said video signal having a first resolution in a memory space divided  
5 into a plurality of first buffers each having a first size;

(B) dividing said memory space into a plurality of second buffers each having a second size in response to said pictures in said video signal changing to a second resolution; and

(C) converting at least one unavailable buffer of said  
10 second buffers to an available condition by marking at least one unread picture of said pictures from said memory space as destroyed.

2. The method according to claim 1, wherein step (C) further comprises the sub-step of:

prioritizing said unread pictures in said memory space on a last-displayed-first-destroyed basis.

3. The method according to claim 1, further comprising the step of:

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displaying each of said pictures read from said memory space.

4. The method according to claim 1, further comprising the step of:

displaying a predetermined picture in place of each of said unread pictures marked as destroyed.

5. The method according to claim 1, further comprising the step of:

displaying a last read picture of said pictures having said first resolution in place of each of said unread pictures marked as destroyed.

6. The method according to claim 1, further comprising the step of:

displaying a first picture of said pictures having said second resolution in place of each of said unread pictures marked as destroyed.

7. The method according to claim 1, further comprising the step of:

skipping said unread pictures marked as destroyed from displaying.

8. A circuit comprising:

a memory defining a memory space divided into a plurality of first buffers each having a first size; and

a decoder configured to (i) store a plurality of pictures  
5 decoded from a video signal having a first resolution in said memory space, (ii) divide said memory space into a plurality of second buffers each having a second size in response to said pictures in said video signal changing to a second resolution and  
(iii) convert at least one unavailable buffer of said second  
10 buffers to an available condition by marking at least one unread picture of said pictures from said memory space as destroyed.

9. The circuit according to claim 8, wherein each of said first buffers holds one of said pictures having said first resolution.

10. The circuit according to claim 8, wherein said first size is different than said second size.

11. The circuit according to claim 8, wherein at least one of said unavailable buffers converted to said available condition has a first physical address range contiguous to a second physical address range for an available buffer of said second buffers.

12. A method of buffering a video signal, comprising the steps of:

(A) storing a plurality of pictures decoded from said video signal having a first resolution in a memory space divided into a plurality of first buffers each having a first size;

(B) dividing said memory space into a plurality of second buffers each having a second size in response to said pictures in said video signal changing to a second resolution; and

(C) converting at least one unavailable buffer of said second buffers to an available condition by moving each unread picture of said pictures toward an end of said memory space.

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13. The method according to claim 12, further comprising  
the step of:

converting at least one of said unavailable buffers to  
said available condition by marking at least one unread picture of  
5 said pictures from said memory space as destroyed.

14. The method according to claim 12, further comprising  
the step of:

ending movement of said unread pictures toward said end  
of said memory space upon completing decoding for a first picture  
5 of said pictures having said second resolution.

15. The method according to claim 12, further comprising  
the step of:

displaying a predetermined picture in place of each of  
said unread pictures marked as destroyed.

16. The method according to claim 12, further comprising  
the step of:

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displaying a last read picture of said pictures having  
said first resolution in place of each of said unread pictures  
5 marked as destroyed.

17. The method according to claim 12, further comprising  
the step of:

displaying a first picture of said pictures having said  
second resolution in place of each of said pictures marked as  
5 destroyed.

18. The method according to claim 12, further comprising  
the step of:

decoding said pictures having said second resolution  
substantially simultaneously with moving said unread pictures  
5 toward said end of said memory space.

19. A circuit comprising:

a memory defining a memory space divided into a plurality  
of first buffers each having a first size; and

a decoder configured to (i) store a plurality of pictures  
5 decoded from a video signal having a first resolution in said

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memory space, (ii) divide said memory space into a plurality of second buffers each having a second size in response to said pictures in said video signal changing to a second resolution and (iii) convert at least one unavailable buffer of said second  
10 buffers to an available condition by moving each unread picture of said pictures toward an end of said memory space.

20. The circuit according to claim 19, further comprising a direct memory access module configured to exchange said pictures with said memory.

21. The circuit according to claim 19, wherein each of said second buffers holds one of said pictures having said second resolution.

22. The circuit according to claim 19, wherein a ratio between said first size and said second size is a non-integer.